

## **BIOL 250 – Microbiology Fall 2008 Lab Syllabus**

Instructor: Jacob M. Hornby, Ph.D.  
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Office hours: T 2:00-3:00, W 10:30-11:30; Additional hours by appointment (schedule subject to change)

Lab:  
MLH 210  
T 9:00-12:00 (section 01)  
Th 9:00-12:00 (section 02)

### ***Objectives:***

The BIOL 250 lab is intended to compliment the information that you will be learning in lecture, but beyond this there will be a chance for you to work directly with microorganisms that exist in the world around us. As most microorganisms are never visible to the naked eye, we often don't have the opportunity to gain an understanding of what they do and how they influence us. My goal is to give you this opportunity to realize that microorganisms are all around us and how they are commonly identified. While most people will associate bacteria with causing various diseases, we also should realize that most bacteria provide a useful, and often times essential, role on our planet.

### ***Student Responsibilities:***

1. It is your responsibility to come prepared to each lab. You will need to read through the designated lab exercise(s) prior to the beginning of lab. There will be a short lab quiz at the beginning of most lab periods. Every lab section is near or at capacity, therefore it will not be possible for you to show up to a different lab section. **If you miss your scheduled lab time**, you will automatically lose points for this lab and will need to speak with a fellow student to find out what you have missed.
2. Most lab periods will begin with a lecture regarding the laboratory exercise you will be doing that day. This will be information to accompany the material for the day and **will be represented** on the quizzes and practical. You will be expected to take notes during lab. Some time will be spent providing demonstrations of the laboratory techniques, but you are responsible for reading the necessary protocols that will be conducted in lab. I will not go step-by-step through every procedure.
3. There will be seven (7) short lab quizzes and one lab practical during the semester. The practical will be on **October 28 and 30** (section 1 and 2, respectively) and will be taken during your scheduled lab time. There will be absolutely no make-up practicals, so **you must be in lab on this day**. No exceptions can be granted. The lab quizzes will be made up of a few questions from the scheduled reading for the day's lab as well as a few questions from the previous lab's lecture. Quizzes will be taken during the beginning 10 minutes of lab and no make up quizzes will be allowed, so you must be in lab on time. I will drop your lowest score for a total of six graded quizzes.
4. While most bacteria are not necessarily harmful, you must be aware that there are some bacteria that can make you ill. The strains we will be working with in lab have been used for a long time and are not as virulent, however they are related to strains that can cause illness. You will be given a handout outlining safety precautions that must be followed while working in the lab. Be sure to keep these precautions in mind throughout the semester. You will be responsible for your own safety, however if I observe you being reckless during lab, you will be immediately dismissed and you will lose points from your grade. **Failure to practice safe laboratory protocols (e.g. gloves and goggles) will result in a reduction of points from your lab grade.**

5. If you have a physical or mental disability or are immunocompromised in any way, please come see me so we can take the appropriate precautions.
6. I will ask you to bring in certain items during the semester, or take some lab materials home with you with the intention of examining the microbial world in your environment. Please act responsibly when bringing in or taking out materials for this lab.
7. You will not be required to keep a formal lab notebook. Rather, you will be required to turn in short, weekly lab assignments that will be graded as lab homework. If you miss a lab, you will not be allowed to turn in the assignment for that lab. Lab assignments will not be accepted late, so be sure to have them turned in by their due date.

***Evaluation:***

Your lab grade will be determined as follows:

Quizzes (6)	25%
Practical (1)	25%
Lab homework	25%
Unknown project	25%

Your final lab grade will constitute 25% of your final grade for the course. **Three unexcused absences from lab will result in an automatic “zero” for the entire portion of your lab grade.**

***Lab Schedule:***

<b>Date</b>	<b>Topic</b>	<b>Lab Exercises</b>
Aug. 26/28	<NO LABS>	p. 1-6, handout
Sept. 2/4	Culture Techniques & Environmental Survey (Quiz 1)	1-1, 1-2, 1-3, 1-4, 2-2, 2-5
Sept. 9/11	Microscopy; Stains I – simple and Gram (Quiz 2)	3-1, 3-2, 3-3, 3-4, 3-6
Sept. 16/18	Stains II - endospore and negative (Quiz 3)	3-5, 3-9
Sept. 23/25	Stains III – unknowns staining	
Sept. 30/Oct. 2	Physiology & Metabolism I (Quiz 4)	5-2, 5-13, 5-16, 5-18
Oct. 7/9	Physiology & Metabolism II (Quiz 5)	5-4, 5-5, 5-6, 5-7, 5-8, 5-17, 5-20, 5-22,
Oct. 14/16	Disinfectants & Antibiotics (Quiz 6)	2-14, 2-15, 7-3
Oct. 21/23	Hemolysis, Dental Caries Susceptibility, Synthetic Epidemic (Quiz 7)	5-26, 7-1, 7-5
Oct. 28/30	<b>LAB PRACTICAL</b>	
Nov. 4/6	Begin unknowns project	5-29, 5-30, 5-31
Nov. 11/13	Open Labs	
Nov. 18/20	Open Labs	
Nov. 25/27	<NO LABS – THANKSGIVING BREAK>	
Dec. 2/4	Open Labs	
Dec. 9/11	Lab cleanup, <b>Unknowns Report Due</b>	